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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/766,736	01/22/2001	Edward J. Bortolini	Bortolini	1298

24283 7590 10/19/2006

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EXAMINER

RAMAN, USHA

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/766,736	BORTOLINI ET AL.	
	Examiner	Art Unit	
	Usha Raman	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2006.
- 2a) ☒ This action is FINAL.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,6 and 11-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,6 and 11-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendment***

1. The Declaration filed on September 14<sup>th</sup>, 2006 under 37 CFR 1.131 is sufficient to overcome the Amit reference. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

***Response to Arguments***

2. Applicant's arguments filed March 31<sup>st</sup> 2006 have been fully considered but they are not persuasive. Applicant's prior art system as disclosed in figure 2 of the disclosure teaches the step of a first and second CMTS (107 and 108) comprising upstream and downstream cable component means located at different locations, exclusively converting data received in a digital base band IP format to RF based format and data received in RF based format to digital base band IP format. As a result, the rejection is maintained.

***Claim Objections***

3. Claim 6 objected to because of the following informalities: the last paragraph in claim 6 contains repeat the limitation, "said step of exclusively converting data...digital base-band IP format", twice. Applicant is advised to revise and correct appropriately.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 6, 21-24 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "said primary hubs" and "said secondary hubs" in line 1 of the last paragraph. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 6, 11-24 rejected under 35 U.S.C. 102(b) as being anticipated by Applicant's admitted prior art system as disclosed in figure 2 of the disclosure.

In regards to claims 1 and 6, applicant's prior art system as illustrated in figure 2 and disclosure in page 4, line 2- page 5 line 11 discloses a broadband cable modem termination system for managing data transmission through a broadband network that interconnects a plurality of end user locations that are connected to a first side of the network and a head end (111) via a cable modem that is connected on a second side of the network, the broadband network comprising a hierarchical network having at least two levels, the broadband CMTS comprising:

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Downstream broadband cable modem component means (downstream component of CMTS in 107) located at a first level of the hierarchical network, which is proximate to the second side of the network, comprising:

Means for exclusively converting data (CMTS is located at PFN 143, therefore exclusively converted at the PFN) that is received in a digital base-band IP format from a source of program material located at the head end (111) to data in a RF based format for transmission to selected ones of plurality of end user locations (users served by PFN 143),

Means for transmitting data in the RF based format exclusively through the network to selected ones of plurality of end user locations (i.e. users served by PFN 143);

Upstream broadband cable modem component means (upstream component of CMTS 108) located at a second level of the hierarchical network which is proximate to the first side of the network and independent of the downstream broadband cable modem component means, comprising:

Means for exclusively converting data (CMTS is located at PFN 144 and therefore exclusively converts data at the PFN) that is received in a radio frequency based format from selected ones of the plurality of end user locations, to data in digital base-band IP format for transmission to the head-end (111)

Means for transmitting data in a digital base-band IP format exclusively through the network to the headend,

Wherein the first and the second level are different levels in the hierarchical network, and the means for exclusively converting data from the digital base band IP format to data in a RF based format is at different location from the means for exclusively converting data from data from a radio frequency based format to a data in digital base band IP format (107 and 108 are at different locations).

In regard to claims 11 and 15, applicant's prior art system as illustrated in figure 2 and disclosure in page 4, line 2- page 5 line 11 discloses a broadband CMTS for managing transmissions through a broadband network that interconnects a headend (111) that is connected to a plurality of primary hubs (122, 121) of the broadband network, and a plurality of end user locations that are connected to a plurality of secondary hubs (131, 134) of the broadband network, the broadband network comprising

Primary hub broadband cable modem component means (CMTS 107 at PFN 143) connected to at least one of the primary hubs (CMTS 107 is connected to primary hub 122 via secondary hub 131 and F3), comprising:

Means for exclusively converting data (CMTS is located at PFN 143, therefore exclusively converted at the PFN) that is received in a digital base band from a source of program material located at the headend to data in a RF based format for transmission to selected ones of the plurality of end user locations,

Means for transmitting the data in the RF frequency based format exclusively through the broadband network to selected one of plurality of end user locations;

Secondary hub broadband cable modem component means (CMTS 108 at PFN 144) connected to at least one of the secondary hubs (134) and independent of primary hub broadband cable modem component means (CMTS 107), comprising:

Means for exclusively converting data (CMTS is located at PFN 144 therefore exclusively converted at that PFN) that is received in a RF based format from the selected one of plurality of end user locations to data in digital base band IP format for transmission to head-end;

Means for transmitting data in digital base-band IP format exclusively through the network to the head-end; and

Wherein the primary hubs and the secondary hubs are located at different levels in the broadband network, and the means for exclusively converting data from digital base band IP format to data in a RF based format is at a different location from means for exclusively converting data from a RF based format to data in a digital base-band IP format (107 and 108 are at different locations).

In regards to claims 12, 16, 19 and 22, the plurality of end user locations are served by a passive fiber node (144) which serves to interconnect the plurality of end user locations to a secondary hub (134), the upstream broadband cable modem component means (upstream component of CMTS 108) is located in the passive fiber node (144).

In regards to claims 13, 17, 20, and 23, the means for exclusively converting data received in a RF frequency based format comprises means for converting radio

frequency based format data from a DOCSIS IP format to a digital base band IP format data. See fig. 2.

In regards to claims 14, 18, 21, and 24, the means for exclusively converting data received in digital base band IP format comprises means for converting digital base band IP format to DOCSIS IP data. -See fig. 2.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nazarathy (US Pat. 6,490,727) discloses a system for separating upstream and downstream communication means in a broadband system by placing the upstream communication means at a fiber node to serve fewer homes thereby increasing upstream bandwidth per subscriber as well as reducing the ingress noise accumulation. See abstract, column 3, lines 4-13 and column 9, lines 24-65) Nazarathy thus provides the motivation for modifying applicant's prior art system as illustrated in figure 1 with figure 2, by placing upstream communication in passive fiber nodes thereby distributing the upstream and downstream functionalities.
9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is



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filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usha Raman whose telephone number is (571) 272-7380. The examiner can normally be reached on Mon-Fri: 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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